

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-27. (Cancelled)

28. (Currently Amended) A method of utilizing a triggerably releasable delivery system ~~in the treatment of a patient~~, the method comprising administering to a mucosal membrane of a the patient a plurality of nanoparticles containing silica coated with alumina and having a size of about 500 nanometers or less, wherein the alumina provides a site on a surface of the nanoparticles to which is bonded a functional compound, wherein the nanoparticles possess a zeta potential of about 20 millivolts or more, wherein the nanoparticles are contained within a vehicle that further comprises a pH altering material, and wherein the functional compound is released from the surface of the nanoparticles upon exposure to a change in pH an environmental or chemical condition.

29. (Cancelled)

30. (Previously Presented) The method of claim 28, wherein the nanoparticles posses a zeta potential of about 30 millivolts or more.

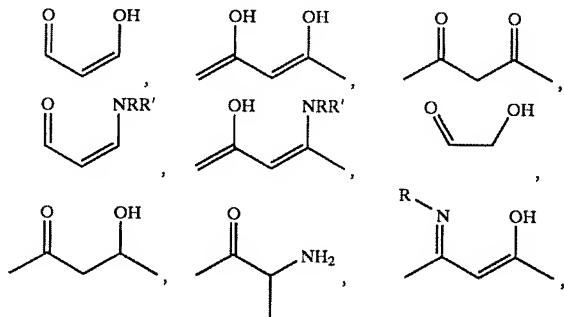
31. (Previously Presented) The method of claim 28, wherein the nanoparticles posses a zeta potential of about 40 millivolts or more.

32. (Cancelled)

33. (Previously Presented) The method of claim 28, wherein the functional compound is an anti-microbial agent, anti-viral agent, or a combination thereof.

34. (Previously Presented) The method of claim 28, wherein the functional compound is a therapeutic agent.

35. (Previously Presented) The method of claim 28, wherein the functional compound contains a moiety comprising:



or a tautomer thereof, or a functional equivalent thereof, wherein R and R' comprise independently hydrogen, an alkyl group, or an aryl group.

36. (Cancelled)

37. (Currently Amended) The method of claim 28 36, wherein the vehicle is a liquid.

38. (Currently Amended) The method of claim 28 36, wherein the vehicle is a gel.

39. (Cancelled)

40. (Previously Presented) The method of claim 28, wherein the nanoparticles are located on a substrate prior to administration to the patient.

41. (Cancelled)

42. (Currently Amended) The method of claim 28 44, wherein the change in pH involves a change from an acidic to an alkaline pH.

43. (Currently Amended) The method of claim 28 44, wherein the change in pH involves a change from an alkaline to an acidic pH.

44. (Currently Amended) The method of claim 28, wherein the nanoparticles are topically administered ~~to the skin of the patient~~.

45. (Cancelled)

46. (Currently Amended) The method of claim 28 45, wherein the mucosal membrane is located in the vagina of a female.

47-61. (Cancelled)

62. (New) The method of claim 28, wherein the pH altering material includes an acid.

63. (New) The method of claim 28, wherein the pH altering material includes a base.

64. (New) The method of claim 28, wherein the functional compound contains the following moiety:



65. (New) The method of claim 64, wherein the functional compound includes tetracycline.

66. (New) The method of claim 64, wherein the functional compound includes baicaline hydrate, baicalein, daunorubicin, or a combination thereof.

67. (New) The method of claim 64, wherein the functional compound includes salicylanilide, salacetamide, salsalate, albofungin, or a combination thereof.